REMARKS

This response is intended as a full and complete response to the Final Office Action dated September 28, 2004. In view of the amendments and the following discussion, the Applicant believes that all claims are in allowable form.

CLAIM OBJECTIONS

Claim 24 has been amended to replace the term "linkage" with "link" as suggested by the Examiner.

CLAIM REJECTIONS

A. 35 U.S.C. §112 Claims 24-29

Claims 24-29 stand rejected under 35 U.S.C. §112 as the Examiner states it is unclear how a single motor rotates the main link and the extension arm. The Applicant points out that only movement of the extension arm and blade is claims, which is fully and accurately supported by the specification. However, the Applicant has amended claim 24 to clarify that the main robot link is rotated by a "hub motor". Accordingly, the Applicant respectfully request the rejection be withdrawn.

B. 35 U.S.C. §103(a) Claims 1, 5-14 and 18-29

Claims 1, 5-14 and 18-29 stand rejected as being obvious over U.S. Patent No. 5,765,444, issued June 16, 1998 to *Bacchi et al.* (hereinafter referred to as "*Bacchi I*") or over U.S. Patent No. 6,155,768, issued December 5, 2000 to *Bacchi et al.* (hereinafter "*Bacchi II*"). In response, the Applicant has amended independent claims 1, 11 and 24 to more clearly recite aspects of the invention.

Independent claims 1, 11 and 24, as amended, recite limitations not taught, shown or suggested by *Bacchi I* or *Bacchi II*. *Bacchi I* and *Bacchi II* teach a wafer transfer device having a main link centrally coupled to a robot base or hub. At opposite ends of the hub, extension arms are coupled. Each extension arm comprises a first arm coupled to the main link, a second arm coupled to the first arm opposite the main link,

and a blade or robot hand coupled to the second arm opposite the first arm. Respective first and second extension motors drive the extension arm. The first extension motor is adapted to rotate the second arm about a first axis that passes through the connection to the first arm. The second extension motor is adapted to rotate the first arm about a second axis passing through the connection to the main link. Simultaneous operation of the first and second extension motors further enables the blade to rotate about the second axis (*see, Bacchi I*, column 5, lines 54-57 or *Bacchi II*, column 6, lines 9-12: "Coordinated operation of first and second motors 50R and 52R in conjunction with the mechanical linkage described below causes hand 30R (*e.g.*, blade) to rotate about shoulder axis (*e.g.*, second axis) 16R.").

The Examiner asserts that the limitation "independently" does not limit the motion to one motor, and that *Bacchi II* states that the blade can be rotated and extended by a single motor. However, neither *Bacchi I* nor *Bacchi II* teaches, shows or suggests that one motor extension motor may provide simultaneous extension (or retraction) of a robot blade between a fully extended and fully retracted position relative to the first axis and rotation of the robot blade about the first axis. Both *Bacchi I* and *Bacchi II* required two motors to move the blade between a fully extended and fully retracted positions relative to an axis offset from the main motor axis. Therefore, neither *Bacchi I* nor *Bacchi II* teaches, shows or suggests a robot apparatus as recited in claims 1 and 11, as amended, or a method for proving robot motion as recited in claim 24, as amended.

Thus, the Applicant submits that independent claims 1, 11, and 24, and claims 5-10, 12-15, 18-23 and 35-29 that depend therefrom, are patentable over *Bacchi I* and *Bacchi II*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

C. 35 U.S.C. §103(a) Claims 2 and 15

Claims 2 and 15 stand rejected as being unpatentable over *Bacchi II* in view of U.S. Patent No. 6,212,968, issued April 10, 2001 to *Hiruma et al.* (hereinafter referred to as "*Hiruma*"). The Applicant respectfully disagrees.

As discussed above, independent claims 1 and 11 from which claims 2 and 15 respectively depend, are patentable over *Bacchi II*. In the instant case, *Hiruma* fails to teach or suggest how one of the extension motors of *Bacchi II* may be modified to provide simultaneous extension (or retraction) of a robot blade between a fully extended and fully retracted position relative to the first axis and rotation of the robot blade about the first axis, as recited by claims 1 and 11. Thus, *Hiruma* may not be utilized to modify the wafer transfer device of *Bacchi II* to teach or suggest the invention of claims 1 and 11.

Accordingly, it is respectfully submitted that the combination of *Bacchi II* in view of *Hiruma* does not render claims 1 and 11 obvious. Thus, the Applicant submits that claims 2 and 15, depending respectfully from claims 1 and 11, are patentable over *Bacchi II* in view of *Hiruma*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

CONCLUSION

Thus, the Applicant submits that all claims now pending are in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issuance are earnestly solicited.

If, however, the Examiner believes that any unresolved issues still exist, it is requested that the Examiner telephone Mr. Keith Taboada at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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KEITH TABOADA, Attorney
Reg. No. 45,150
(732) 530-9404

Moser, Patterson & Sheridan, LLP
595 Shrewsbury Avenue
Suite 100
Shrewsbury, NJ 07702

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Allyson M. DeVesty
Signature

Allyson M. DeVesty
Printed Name of Person Signing

11-22-04
Date of signature